COTTON RAISING BEING MECHANIZED: REQUIRES LESS LABOR

Labor requirements of cotton production declined by 16 per cent per acre and 20 per cent per bale from 1907 to 1936.

The decline, in which all areas shared to some extent, reflects mainly the increasing application of more efficient equipment. The greatest declines took place in the Western Cotton Area which also experienced the greatest increases in production. In some areas mechanization has been proceeding very rapidly during the last three or four years and large numbers of tenants have been "tractored off" and can expect work on cotton only as day laborers during the peak seasons.

These are the outstanding conclusions of a report of the National Research Project of the Works Progress Administration entitled "Changes in Technology and Labor Requirements in Crop Production: Cotton," made public today by Administrator Harry L. Hopkins.

The report points out that "the tractor is now available for the pre-harvest operations of seedbed preparation, planting and cultivation. Its use is feasible wherever the topography of the country presents level or gently rolling land, as in the
Mississippi Delta, the Western Cotton Area of Oklahoma and northwest Texas, and the cotton lands of California, Arizona, and New Mexico. Under such conditions the use of the tractor is economical when cotton is grown on large farm units, such as exist in relatively greater numbers in the areas West of the Mississippi where the topography is most favorable.

In his letter of transmittal, Corrington Gill, Assistant Administrator in charge of all WPA research, calls attention to the background of the cotton problem before stressing the trend toward mechanization, and the westward shift of production. "Cotton is the largest cash crop produced in the United States and is grown in one of the most highly specialized farm regions of the world," he writes. "Its production involves some two million farms and about nine million persons. Since 1909 the infestation of the boll weevil has caused some profound changes in methods of production, in yields per acre and quality of staple, and in location of acreage and production.

"Problems of soil-fertility maintenance, particularly in the Eastern Cotton Area where much of the soil is severely eroded, have been aggravated by a system of land tenure which makes it difficult to follow any long-range program of soil conservation. In addition, with increased production in foreign countries, competition on the world market has become increasingly severe.

"In the face of these difficulties, technology has
played an important role. Improved practices in growing cotton and the selection of early maturing varieties have not only checked the downward trend in yields that followed the boll-weevil infestation, but also have resulted in regaining the levels which prevailed before the advent of the weevil. Since 1928 there has been a tendency toward an increase in the average staple length of cotton.

"The average amount of labor required to produce a bale of cotton in the major cotton-producing areas for the period 1933-36 amounted to 253 man-hours in the Eastern Cotton Area, 250 in the Delta Area, and 178 in the Western Cotton Area. This amounts to 1.98 pounds of cotton per man-hour in the Eastern Area, 2.00 in the Delta Area, and 2.81 in the Western Area. Average prices of lint cotton in the United States were 10.2 cents in 1933, 12.4 cents in 1934, and 11.1 cents in 1935. These prices applied to the hourly productivity present a rough picture of gross hourly returns to the farmer; out of this hourly return of from 20 to 30 cents the farmer has to pay for fertilizer, equipment, feed for work stock, land rental, and all other expenses of production. Under these conditions, incomes of the producers are anything but adequate.

"Average annual earnings in 1934 for the various classes of tenants were $130 per family for wage hands, $312 for cropper families, $417 for other tenant families, and $354 for cash-rent families. When we consider the fact that tenancy in one form or
another embraces a majority of the cotton producers, it is small
wonder that the conditions under which cotton is produced have oc-
cupied a prominent place in the deliberations of governmental as
well as private relief agencies."

Discussing technological trends, Mr. Gill said: "In
several of the important cotton-growing regions, notably in the
Mississippi Delta and in Western Areas, the trend toward mechaniza-
tion has been greatly accelerated in the past few years. Numerous
tenants have already been 'tractored off' the land and now find em-
ployment on the cotton crop only as hired day laborers and for peak
operations such as chopping and picking. There is evidence that
this shift to tractor power and to larger implements requiring less
farm labor per bale will continue."

The report is one of a series of "Studies of Changing
Techniques and Employment in Agriculture" by the WPA National Re-
search Project on Reemployment Opportunities and Recent Changes in
Industrial Techniques, directed by David Weintraub and Irving Kaplan.
It was prepared by William C. Holley and Lloyd E. Arnold, under the
direction of John A. Hopkins, and is published as a 132 page book-
let with many illustrations and statistical tables.